and body generally, for two or three weeks after tapping, and the medicine and friction continued for at least six weeks. I would particularly wish to enforce the importance of the after-treatment, as on that depends, very much, the success or failure of the case.

"It probably will, and may be argued," he adds, "by many, that these cases were not truly *ovarian*, and thus endeavour to do away with any merit that would otherwise arise from the treatment; but I would draw attention to the *facts*, more particularly of the first case. I saw the young lady when the tumour was very small and deeply-seared in the iliac fossa. I watched its growth from time to time, and distinctly marked its circumscribed edges and felt the fluid when it was first rising out of the pelvis; and, moreover, my friend, Dr. Locock, whose experience in such cases is much greater than my own, at once pronounced it *ovarian*, as well as all the other eminent men who saw the patient. There can, therefore, I apprehend, be no doubt as to its character, nor do I think, when coupled with the succeeding cases, can there be any fear of its permanent cure."

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23. *Pathological and histological researches on inflammation of the nervous centres.*—We gave in our number for January last, p. 200, the general conclusions of Dr. J. H. BENNETT, relative to inflammation of the nervous centres. We return again to this very valuable paper in order to give some further account of the results of the author's researches.

On the nature of softenings of the nervous centres.—Much uncertainty exists in regard to the nature of the softenings so often met with. Dr. Bennett is of opinion that two kinds of cerebral and spinal softening exist, an inflammatory and a non-inflammatory, which may always be distinguished from each other by means of the microscope.

1. *Character of inflammatory softening.*—On examining under the microscope a portion of inflamed and softened nervous tissue, in addition to the normal, tubular, and granular structure, there will be found, 1st, exudation granules coating the vessels, or floating loose, either isolated or in the form of masses; 2dly, exudation corpuscles, with distinct cell-walls, and sometimes nucleated. The more pultaceous and diffluent the softening is, the more numerous are the granules and corpuscles. The nervous tubes and normal structures also then become more and more broken down. With regard to the *nature* of inflammatory softening, it appears to result from the active growth, development, and breaking-down of nucleated cells (exudation corpuscles) in the effused blood plasma. "It is not a mere maceration of the textures in serum. No doubt the serum performs an essential part in the process, inasmuch as moisture is necessary for every species of growth. But we are of opinion that softening cannot be considered as dependent on inflammation without the existence of these bodies. So far from being connected, as some have supposed, with diminished nutrition, it is, in point of fact, an increased nutrition in the excess of blood plasma effused."

2. *Character of non-inflammatory softening.*—Here the cylindrical and varicose tubes of the part are found more soft and easily separable from each other. They have more or less lost their natural firmness and consistence; are readily torn across; the varicosities are easily enlarged by pressure, and, when separated or broken off, assume a globular form. The tubes, also, are more or less broken down. No exudation granules, masses or corpuscles can be detected.

The causes of non-inflammatory softening are four in number: 1st, mechanical violence in exposing the nervous centres; 2d, a mechanical breaking up of the nervous tissue, by hæmorrhagic extravasations, either in mass or infiltrated in small isolated points, constituting capillary apoplexy; 3d, the mere imbibition of effused serum, which loosens the connection between the nervous tubes, and diminishes the consistence of the nervous tissue; 4th, the process of putrefaction.

Some authors have endeavoured to distinguish inflammatory from non-inflammatory softening, by the presence in the former of a zone of red vessels, or of purulent matter; this distinction, however, according to Dr. Bennett, is not a valid one, inasmuch as, according to his observations, the zone of red vessels is very rarely met with in inflammatory softening, and the infiltration of purulent matter has no real existence. The opinions which attribute softening to a lesion *sui generis*, to diminution of nutrition, to gangrene, obstruction of arteries, &c., are also considered hypothetical in the highest degree.

The symptoms which accompany the two forms of softening differ widely. In twenty-four observations, in which cerebral softening was discovered, exudation corpuscles existed in eighteen, in the other six no traces of these bodies could be found. In four, however, out of the eighteen cases of inflammatory softening, there also existed in another part of the brain non-inflammatory softening. In the fourteen cases of simple inflammatory softening, well-marked symptoms invariably existed, such as loss of consciousness, preceded or followed by dulness of intellect, contraction and rigidity of the extremities, or paralysis.

In three of the six cases of simple non-inflammatory softening, there was a large extravasation into one side of the brain, followed by sudden coma and hemiplegia. In the fourth and fifth cases there was sudden loss of consciousness, with convulsions, but no paralysis or contraction, and on dissection, capillary apoplexia, with central softening, was found. In the sixth case, with extensive softening without effusion of blood, there was no disturbance of intellect, no contraction, no paralysis. Dr. Bennett considers that the softening arose from mechanical destruction of the tissue in the first three cases, and from post mortem action in the three last.

Of the four cases in which both kinds of softening existed, in the first there was hemiplegia of the left side only. Softening was found in both corpora striata, but exudation corpuscles only in the right, the side opposite to the paralysis. In the second case there was impaired intelligence, loss of speech, disorganization of the eye, and convulsions before death ; there was no paralysis. Abscesses surrounded by inflammatory softening were found in the external portion of the left anterior and middle cerebral lobes, explaining the symptoms present ; but there was also non-inflammatory softening of the central parts of the brain producing no symptoms whatever. In the third case there was paralysis of both arms, contraction of the right, and tetanic spasms of the muscles of the mouth and neck. Inflammatory softening existed in the pons varolii, extending more to the left side ; non-inflammatory softening of the right corpus striatum. In the fourth case there was headache, prominence of the eyeball, and coma, but no paralysis. A fungoid tumour was found at the base of the orbit, and an abscess in the anterior lobe of the brain, surrounded by inflammatory softening. There was also central yellow softening of the left hemisphere producing no symptoms.

Dr. Bennett considers that much of the obscurity which attaches to inflammation of the nervous centres arises from the fact that pathologists have hitherto confounded softening dependent on inflammation, with softening occasioned by post mortem changes or mechanical violence, and, consequently, have been astonished to discover extensive softening after death, no corresponding symptoms having existed during life; on the other hand, where well-marked symptoms have been present, nothing has been discovered after death, though inflammation actually existed, capable of demonstration by the microscope alone, which shows the presence of exudation corpuscles.

Dr. Bennett next proceeds to make some remarks on the colour of softenings; the general relation between the symptoms and the seat of the lesion ; on contraction of the limbs as a symptom of inflammatory softening ; on the curability of softening ; and on the connection between softening and hæmorrhage.

1. *Colour of cerebral and spinal softenings.*—Softening may be tinged red, yellow, white, or gray, without, however, any essential difference as to structure. As a general rule, it would appear that the red may be considered as acute, the yellow subacute, and the white or gray chronic softening ; but this is by no means invariable.

The red and yellow colour is evidently connected with the presence of blood or its colouring matter. Sometimes the yellow softening is contained within the reddened portion, and somewhat resembles a purulent collection. At others, it surrounds the extravasation of blood, as is most common. Some have supposed the purulent infiltration is the cause of yellow softening, but such does not agree with the observations of Dr. Bennett, who has never met with a pus corpuscle in softened brain or spinal marrow.

In the fawn-coloured softenings, which are frequently observed independent of extravasated blood, the author has always found exudation corpuscles, and thinks it very probable that the fawn tint is attributable to the presence of these bodies, which are usually of a brownish or blackish colour.

White softenings are generally non-inflammatory; in some cases, however, they contain numerous exudation corpuscles, which are then colourless.

2. *General relation between the symptoms and the seat of the inflammatory softening.*—In ten cases examined by Dr. Bennett, lesions of the central parts of the brain on one side were discovered; the symptoms during life consisted of contraction or paralysis of the extremities on the side opposite to the disease. In six cases there were lesions of the central parts on both sides; symptoms during life, contraction or paralysis on both sides of the body. In four cases, lesions of the peripheral parts only existed; this group was characterized by the absence of paralysis or contraction of the extremities, and by either delirium or coma. This analysis, it will be seen, is favourable to the hypothesis which ascribes motion and sensation to the central parts, intelligence to the surface.

3. *Contraction of the limbs in inflammatory softening, and in hæmorrhage.*—Some dispute has taken place as to the presence of more or less contraction or rigidity of the limbs in inflammatory softening, some authors contending that it is a highly characteristic symptom, others asserting that its presence, when it does occur, is altogether incidental. Dr. Bennett is of opinion that, in idiopathic inflammatory softening of the brain, contraction in one or more limbs is a common symptom. In *simple* hæmorrhage into the brain, on the other hand, without the existence of any inflammation, contraction seldom, if ever, occurs.

4. *The curability of cerebral and spinal softenings.*—Though numerous observations have fully demonstrated the possibility of this occurrence, Dr. Bennett considers that the anatomical marks or appearances, by means of which pathologists have endeavoured to demonstrate the fact, are very fallacious. "The slight indurations occasionally met with in the nervous substance are spoken of by some authors as *cicatrices*—a term, we think, wholly inapplicable to them. Durand-Fardel alludes to the softening resembling chalky milk as a proof of the passage of the lesion into a state of cure, and Dr. Sims speaks of the fawn-coloured cavities as evincing the same fact." In one case of hemiplegia of long standing, in which the chalky milk softening was found, the granules of the exudation corpuscles were seen to be large, equal in size, and very transparent, in fact presenting a very unusual appearance; it is not improbable, therefore, that the granules were undergoing absorption; and consequently, the opinion of Durand-Fardel may be correct. On the other hand, the appearances described by Dr. Sims were met with in one case, but here, on the application of the microscope, numerous exudation corpuscles and granules were met with, precisely similar to those seen in parts undoubtedly affected with acute inflammation. Intense rigidity of the opposite side of the body also existed, without any other lesion than this which could at all account for it. Dr. Bennett's opinion, therefore, is, that the fawn-coloured spots described by Dr. Sims are no evidence of the cure of inflammatory softening.

5. *The connection between softening and hæmorrhage.*—It has long been a question, does the hæmorrhage precede and cause the softening, or does the softening ever precede and induce the hæmorrhage? In three cases related, hæmorrhage took place suddenly, producing hemiplegia, and death within a few hours; surrounding the coagulum the cerebral structure was softened, but apparently only mechanically, and no exudation corpuscles were found. In two other cases, with the same symptoms, death took place respectively in seven days and five weeks. Here the surrounding cerebral structure was softened, and numerous exudation corpuscles were discovered. Thus it would appear necessary

for a certain time to elapse before the hæmorrhage can produce the inflammation. On examining the mode of accession, also, there is no reason for supposing that softening preceded the hæmorrhage. In seven out of eight cases the attack was sudden, and in the eighth, where headache had existed for some time, this was evidently congestive, and the softening contained no exudation corpuscles or granules.

With regard to the character of the softening that frequently surrounds apoplectic clots or sanguineous infiltration, Durand-Fardel asserts, that if the softening extend beyond the limits of the infiltration, if redness surround it, and if enough blood be not infiltrated to have mechanically produced a diminution of consistence, then the affection is inflammatory. If, on the other hand, the softening is slight, its extent limited, if there be an adhesion of the meninges, and if the surrounding parts appear healthy, then the affection is simply sanguineous infiltration. With these distinctions, however, our author is not disposed to agree; two cases are brought forward, in one of which the appearances first mentioned were presented, whilst the second resembled what is described as simple infiltration. In neither case could any corpuscles or granules be discovered.

At this point Dr. Bennett pauses, promising, however, to renew the inquiry at some future period. The subject is one of the highest interest, and the observations of the author are deserving of the utmost attention.—*Med. Chir. Rev.* from *Edin. Med. and Surg. Journ.*, Oct. 1843.

24. *Inoculation of Vetraria in Neuralgia.*—M. Lafargue has, in many cases of Prosopalgia, had recourse to this endermic mode of treatment with singularly good effects. The plan he follows is nearly the same as that used for vaccination: a number of punctures are made with the point of a lancet that has been charged with a saturated solution of the alkaloid. Each puncture becomes at once the seat of a sharp pain, which is usually compared by the patient to a continual deep pricking with the point of a needle. This unpleasant sensation lasts from five to fifteen minutes, and then gradually subsides; and with it, the red areola that has formed around the punctured spot. M. Lafargue recommends, in severe cases, that the inoculation be repeated morning and evening; and that as many as ten or twelve punctures should be at a time. He has used the same method of treatment with decided good effects, in several cases of partial paralysis.—*Ibid.*

25. *Nux Vomica in Neuralgia.*—M. Roclants, a Dutch physician, reports most favourably of the effects of this potent drug in severe cases of neuralgia of the face and other parts, and communicates at the same time the therapeutic results obtained by many of his professional friends. Out of the twenty-nine severe cases, a perfect cure was effected in twenty-five, and decided relief was afforded in the other four. The dose, in which the powdered nux vomica was administered, was from three to ten grains, and upwards, in the course of the twenty-four hours. In all cases its effects should be narrowly watched, as unpleasant consequences have occasionally resulted from incaution on the part of the physician. M. Roclants is inclined to regard the nux vomica as, on the whole, the most efficient and certain remedy against severe neuralgia; he has seen several cases, which had resisted the long administration of steel, bark, and all the other most approved means, yield to its use.

M. Trousseau has recently been very strongly recommending the strychnos as a most valuable remedy in obstinate chorea.—*Ibid.*

26. *Belladonna in Dysmenorrhœa.*—Dr. G. Bird has found belladonna, properly prepared, of the greatest efficacy in that form of dysmenorrhœa which was unaccompanied by organic change, or attended by the discharge of shreds from the uterus, and in which the pain was referred to the lower part of the abdomen, immediately over the uterus. When the patient was of a leuco-phlegmatic habit, pale and chlorotic in appearance, he ordered five grains of extract of bel-